Actions requested to reduce maternal deaths due to bleeding at or after caesarean sections

The increase in bleeding at or after caesarean sections is taking place in the context of a high HIV prevalence, a higher rates caesarean section, anaemia and women with previous caesarean sections; all these factors contribute to the increasing incidence of haemorrhage. Prevention of bleeding must entail preventing anaemia, reducing the caesarean section rate and preventing and treating HIV infections. This must be coupled with improved training and supervision of junior and sessional doctors, more strict indications for caesarean section and an overall better care of the woman during labour. The increase in haemorrhage at or after caesarean section can be regarded as a marker of the quality of care during labour. Doctors and professional nurses and advanced midwives must behave professionally and if they do not must be held accountable by their clinical managers.

There are FIVE main ACTION messages

- EARLY RECOGNITION (covers monitoring, problem recognition and assessment)
- IMMEDIATE RESUSCITATION (covers algorithms for resuscitation, availability fluids, giving sets and blood)
- IMMEDIATE MEDICAL and SURGICAL skills to stop the bleeding (covers skills training, ESMOE, algorithms, team work, supplies)
- EMERGENCY TRANSPORT (on site inter-facility)
- LEADERSHIP (covers responsibility, accountability, referral systems, communication)

To facilitate the implementation of these action messages, the following actions are requested from the stakeholders at various levels of management and care. The stakeholders include the health care policy makers, managers, providers, professional bodies and societies, educational institutions and the community. In other words the whole health care community involved in the care of pregnant women and their babies, not matter how small the involvement. The process will need to be facilitated by the Maternal Child and Women’s Health cluster, the chairperson of the NCCEEMD, and the new district clinical specialist and ward primary care teams.

Actions requested from the Policy makers (Minister of Health and Provincial MECs)

- Promote pregnant women giving birth in safe maternity units
- Ensure the health care managers provide safe maternity services
- Actively promote the Free State model of inter-facility transport
- Promote vaginal delivery as the safest option for normal pregnancies

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Actions requested from the provincial MCWH managers and the District Managers

- Ensure that district, regional and tertiary hospitals have 24 hours functioning theatres
- Ensure there is blood for blood transfusion always available at the hospital
- Ensure there is sufficient trained staff for the anaesthesia, surgery and monitoring of the patient in the recovery area
- Ensure adequately staffed labour wards.

Actions requested from district clinical specialist teams (DCST)

- Determine whether the district has the appropriate facilities and equipment for the providing the seven signal functions of basic emergency obstetric care for community health centers and the nine signal functions for comprehensive emergency obstetric care at district hospitals and higher and report the findings to the district manager so corrective action can be taken.
- Determine whether the health care providers are skilled in managing labour, use of the partogram and postpartum haemorrhage and inform the district manager of the findings
- Determine the emergency inter-facility transport procedures and audit the time for transfers. Inform the district manager and Emergency Medical Services (EMS) manager of the findings
- Ensure doctors performing caesarean sections are competent to do so. If they are not the district clinical specialists (DCS) should ensure the doctor is trained.
- Ensure that all doctors trained to perform caesarean sections (CS) are trained in additional medical and surgical procedures eg oxytocic agents, compression sutures, balloon tamponade to treat excessive bleeding at CS.
- Ensure that there are medical staff at all regional and large district hospitals who can perform caesarean hysterectomy
- Ensure doctors performing anaesthesia for caesarean sections are competent to do so. If they are not the DCS should ensure the doctor is trained
- Ensure that doctors providing anaesthetics are trained in appropriate use of oxytocic agents at CS
- Ensure the criteria for referral are established and adhered to.
- Disseminate PPH posters in labour wards, theatre and Recovery, postnatal areas.
- Teach relevant clinical staff using PPH video tool
- Ensure an audit is kept of all caesarean sections and women with postpartum haemorrhage
Actions requested from ward primary care team

- Educate pregnant women about obstetric haemorrhage and transport plans
- Educate pregnant women about the need to take iron, folate and calcium supplementation to prevent anaemia and pre-eclampsia

Actions requested from CEOs

- Ensure the seven signal functions for basic emergency obstetric care and the nine signal functions for comprehensive emergency obstetric care are available that the community health centres and district hospitals respectively
- Ensure that district, regional and tertiary hospitals have 24 hours functioning theatres and that urgent CS can be done timeously
- Ensure there is blood for blood transfusion always available at the hospital; and replaced after use.
- Ensure the maternity unit always has sufficient stocks of equipment to put up IV lines, appropriate resuscitation fluid and oxytocics
- Ensure there is sufficient trained staff for the anaesthesia, surgery and recovery area
- Ensure adequately staffed labour wards
- Ensure the early warning monitoring charts are available for monitoring pregnant women after caesarean section or with any obstetric complication
- Ensure emergency transport is available on-site at district hospitals for inter-facility transfers
- Ensure EOST exercises are conducted at least monthly. Scenarios with obstetric haemorrhage must be priority exercises.
- Ensure all clinical staff involved in the care of pregnant women are trained in ESMOE.
- All CEO”s must consider “ privileging “( granting permission to provide patient services within well-defined limits based on clinical competence) for all staff doing caesarean sections
- Ensure doctors conduct themselves in a professional way

Actions requested from clinical managers and heads of Obstetrics and Gynaecology departments

- Ensure training in and implementation of the attached protocols
- Ensure training of all doctors in safe CS techniques; and additional measures to control excessive bleeding at CS
- Ensure all specialist and senior medical officers are able to perform caesarean hysterectomy
- Ensure EOST (Fire Drills) exercises are carried out concerning haemorrhage and anaesthetic emergencies.
- Ensure all clinical staff are trained in ESMOE
- Audit all cases of severe haemorrhage and display trends by graphs or charts in labour ward and theatres
- Use Foley catheter induction as first step in induction followed by low dose misoprostol

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Audit all indications for caesarean section by using the Robson method
Syntometrine or ergometrine should be used as the second line treatment for uterine atony in preference to misoprostol, unless contraindicated.
Ensure all women with a blood loss in excess of 1000mls need to be immediately assessed by a doctor
Ensure Emergency Obstetric Simulation Training (EOST) exercises are conducted at least monthly. Scenarios with obstetric haemorrhage must be priority exercises.
Ensure women post-CS are monitored in an appropriate site.
Ensure all women who have had a postpartum haemorrhage are monitored in a high observation area for at least 12 hours after the event.
Ensure the doctors conduct themselves in a professional way

**Actions requested from operational managers of maternity units**
- Ensure the partogram is used and completed fully and interpreted correctly
- Ensure the Surgical checklists are completed before a caesarean section
- Ensure Early Warning Monitoring charts are used for all pregnant women with complications
- Ensure women post CS are monitored in the following manner:
  - Half hourly for 2 hours
  - Hourly for a further 4 hours
  - 2 hourly for a further 6 hours
  - 4 hourly until discharge
  - Observations to be recorded
    - Pulse rate
    - Blood pressure
    - Vaginal bleeding (pad checks)
    - Urine output and temperature 4 hourly
- Ensure the woman is nursed in an area where there are health care professionals that can do the observations regularly and are not put in a ward where observations are difficult to perform
- Ensure a companion to the woman is allowed and encouraged
- Disseminate PPH posters in labour wards, theatre and recovery, post-natal areas.
Actions requested from all doctors involved in care of pregnant women
- Ensure you are trained in Essential Steps in Managing Obstetric Emergencies (ESMOE) and participate in EOST exercises in particular haemorrhage drills
- Ensure you are able to complete and interpret a partogram
- Ensure you are able to interpret an cardiotocograph (CTG)
- Ensure you are able to perform a CS safely according to the technique described in the Caesarean Section monograph
- Ensure that you are trained in additional medical and surgical procedures e.g. oxytocic agents, compression sutures, balloon tamponade to treat excessive bleeding at CS.
- Ensure you are able to perform an assisted delivery safely
- Ensure you conduct yourself in a professional way

Actions requested from the midwives and all nurses involved in the care of pregnant women
- Ensure are nursing staff are familiar with and use the early warning monitoring charts
- Ensure all nurses working in maternity units are familiar with and can complete and interpret a partogram
- Ensure the nursing staff are trained in ESMOE and participate in EOST exercises; in particular haemorrhage drills
- Ensure all advanced midwives can conduct a vacuum delivery
- Ensure that all nurses join in the regular EOST exercises (“Fire Drills”)

Actions requested from Nursing Colleges and Nursing Departments in universities
- Ensure all nurses are trained in ESMOE
- Ensure all nurses are trained in the use of the Early Warning Monitoring charts

Actions requested from Medical Schools
- Ensure all medical students are trained in ESMOE
- Ensure all medical students are trained in the use of the Early Warning Monitoring charts
- Ask all heads of Department to hold a symposium in their department to use the educational materials and to discuss the problem within their departments
- Ensure all students are taught what is expected by the professional conduct of a doctor

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**Actions requested from HPCSA**

- Include all the ESMOE modules in the intern logbook and that participation in these modules is essential and must be signed off prior to registration as a community service doctor.
- Ensure all interns are trained in performing caesarean section. Where this is not possible at sites where interns are trained, then the site must ensure the intern is appropriately trained elsewhere.
- Strengthen the monitoring and signing of the Log books by ensuring these are carefully checked on a quarterly basis and appropriate training be taken where necessary.
- Ensure that doctors who qualify overseas undergo examinations on emergency care.

**Actions requested from the Community**

- Insist on the right to have an accompanying person present with the woman in labour.
- Promote the policy of starting antenatal card before 14 weeks and to take the essential pregnancy supplements (iron, folate and calcium).
- Understand the need to arrange transport to the facility where you intend giving birth.

**Actions by Professional Bodies/ Organizations and the Colleges of medicine (SASOG and SARCOG)**

- Ensure that messages about ESMOE training and other measures listed above are brought to the attention of all members at every conference and educational meeting.
- Promote audit tools of monitoring Severe Post-partum Haemorrhage in Private Hospitals.
- Actively promote all publications on “steps to take to reduce severe PPH.
- Ensure that all registrars in training are aware of the management PPH by regular questions in diploma and fellowship OSCE’s and OSPE’s.